

III. CLAIM AMENDMENTS

1. (Currently Amended) An apparatus for forming a twisted pair cable, the apparatus comprising:

a device for rotating at a first predetermined rate of rotation a pair of elongated conductor strands about a twisting location, the device guiding the elongated conductor strands to the twisting location;

a twist stop device mounted ~~adjacent~~at the twisting location and effective to grip running lengths of elongated conductor strands passing through device for rotating and the twisting location; and

a strand puller for engaging the running lengths of elongated conductor strands, the strand puller advancing the strands passing through the device for rotating, and the twist stop device, the strand puller operating at a second predetermined rate of rotation; wherein

the device for rotation and the strand puller ~~operating~~operate independently to make the twisted pair cable, the twisted pair cable having different twist rates on different segments, the segments having different lengths.

2. (Currently Amended) An apparatus ~~in accordance with Claim 1~~
further for forming a variable pitch twister pair cable
comprising:

a rotating frame operatively associated with a stationary frame, the rotating frame revolving about ~~the~~a twisting location, the rotating frame including conductor guides for directing ~~the~~ running lengths of elongated conductor strands along predetermined paths to the twisting location;

a twisting drive operatively connected to the rotating frame and driving the rotating frame in revolutions about the twisting location; and

a puller drive operatively connected to ~~the~~a strand puller and driving the strand puller to advance strands through the conductor guides, the twisting location, the twist stop device, and the strand puller, and wherein

the twisting drive and the puller drive are adapted to operate at varying speeds relative to each other to generate twisted pairs of strands passing through the apparatus into a twisted pairs cable, the twisted pair cable having adjacent lengthwise segments with segment lengths that differ one from the other, and wherein a number of twists of one segment length differ from a number of twists of another segment length.

3. (Original) An apparatus in accordance with Claim 1 wherein the first predetermined rate is provided by a controller for controlling a rate of rotation of the twisting drive.

4. (Original) An apparatus in accordance with Claim 1 wherein the second predetermined rate is provided by a controller for controlling a rate of rotation of the strand puller drive.

5. (Original) An apparatus in accordance with Claim 1 wherein a controller comprises a computer programmed to control the twisting drive and the puller drive as determined by algorithms stored in the computer to produce the twisted pair cable having a predetermined twist rate over segment lengths, to change the predetermined twist rate and to change the segments lengths wherein adjacent twisted pair cables have different twist rates at adjacent locations.

6. (Original) An apparatus in accordance with Claim 1 wherein the twist stop device converts a rotating cable of a twisted pair from the twisting location to a non-rotating cable for take-up on the strand puller.

7. (Cancelled)

8. (Currently Amended) A method in accordance with Claim 7A method of forming a variable twist rate twisted pair cable, the method comprising the steps of:

rotating a frame on which two conductor strand spools are mounted at a first predetermined rate to create a twisting relationship between two conductors being fed from each strand spool and through the frame;

feeding the two conductors through a twist stop device that
fixes a relative placement of each conductor as the
conductors are twisted together from the rotating carriage
and through the twist stop;

rotating a strand puller at a second predetermined rate to pull
the two conductors from the rotating carriage and through
the twist stop and to collect the variable twist rate
twisted pair cable formed; and

wherein the first predetermined rate is independent from the
second predetermined rate in order to vary the number of
twists per foot over different segment lengths of the cable.

9. (Original) A method in accordance with Claim 8 wherein the
first and second predetermined rates are provided by a
controller.

10. (Original) A method in accordance with Claim 9 wherein the
controller comprises a programmed computer having algorithms
therein which determine the twist rate of the twisted pair cable,
the twist rate being variable from one lengthwise segment of the
cable to another lengthwise segment of the cable and wherein the
length of each lengthwise segment is different.

11-13. (Cancelled)